

ORIGINAL LOG BOOK OF THE "FISH HAWK"

UNITED STATES FISH COMMISSION

STATION NUMBERS

Numbers 917 to 960

M. S. F. L.
Record Book
1884.

No. 1.

Observations 917 -

July 16th to

Copy

TEMPERATURE RECORD.

Instrument used, 917 Trawl

Current number of observation, 917

Date, July 16.

Locality, Off Martha's Vineyard

Bearings, Lat. $40^{\circ} 22' N.$
Long. $70^{\circ} 42' W.$

Time of day, 4, 10 A.M.; of tide,

State of sky, Clear

Temperature of air, 66°

20 f. 45° " surface of water, 63° ($46^{\circ} 40' 2''$)

" at depth of 10 fathoms, 49° ($46^{\circ} 40' 3''$)

" of bottom, 42°

Depth, in fathoms, 43. = 44

Nature of bottom, Green mud

Direction of surface current, S. E. Force, ^{wind}

drift Force of surface current, N. E. $\frac{3}{4}$ miles.

Direction of bottom current,

Force of bottom current,

Name of vessel, Fish Hawk.

To what service attached, U. S. F. C.

Name and rank of commanding officer, Z. L. Tanner

Lieut., U. S. N.

Name and position of observer,

Prof. A. P. Chapin
Geologist.

917
REMARKS.

Pandalus ~~Montagui~~ ^{le Moerens}? few
Asterias vulgaris. half a dozen
Pecten tenuicostatus abundant &
Ophioglypha Sardii, ^{large} _{1-2 lbs down}

Lunaria Nervos, Shell.

- Egg Cases abd.

Crayon vulgaris. ~~6~~ 2.

Cyprina Islandica small.

Goldia sapotilla one.

Pleurobranchia Landa,

TEMPERATURE RECORD.

Instrument used,

Travel

Current number of observation, 918.

Date, July 16, 1881.

Locality, Off Martha's Vineyard.

Bearings, Lat. $40^{\circ} 20' 24''$ N.

Long. $70^{\circ} 42' 30''$ W

Time of day, 5.33 A.M.; of tide,

State of sky, Clear

Temperature of air, 67°

20f. 45° " surface of water, 63 (46402)

" at depth of 10 fathoms, 49°

" of bottom, 42° (46403)

Depth, in fathoms, 45f. = 46.

Nature of bottom, green mud.

Direction of surface current, wind. S.E. force 1.

drift Force of surface current, N.N.E. 1 m

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

leptocerus

Pandalus Montafonii? very abdt.
Ophiocten Tassii. "

Cest. vulgaris. several

Clidia elegans . 1.

Amphiura Squamata?

~~*Pterioteuthis tenera*~~ ?

-*Bleurobranchia Lardia*,
dunata Heros,

-*Moldia Sapotilla*,

Cardium pinnulatum

-*Cyprina Islandica*, very yg.

-*Anomia aculeata*,

-*Pecten tenuicostatus*, young

-*Lucina filosa* dead,

~~Sapetum~~

Laematonice armata,

Empagrus, in *Neplumna pygmaea*

Nephthys incisa.

-*Scaphander punctostriata*

Caprella

Aphrodite aculeata,

-*Hirudis Conradi* dead,

Cancer borealis young?

Alcyonium subrum

-*Calalina tridentata*

TEMPERATURE RECORD.

Instrument used, Trawl

Current number of observation, 919.

Date, July 16, 1881.

Locality, Off Marthas Vineyard

Bearings, Lat. $40^{\circ} 16' 18''$ N

Long. $70^{\circ} 41' 18''$ W.

Time of day, 7 A.M.; of tide, —

State of sky, Clear

Temperature of air, 70°

" surface of water, 66° (46402)

" at depth of 15 fathoms, 48°

" of bottom, $42\frac{1}{2}$ (46403)

Depth, in fathoms, $57\frac{1}{2} = 53$.

Nature of bottom, green mud

Direction of surface current, wind S. force 1.

Drift Force of surface current,

N.E. 1 m

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

66.

Name and position of observer,

42
24

9/9

REMARKS.

Beckon Kinnicostatus very abundant
mostly smug 1-2 inch

TEMPERATURE RECORD.

Instrument used,

Trawl

Current number of observation,

920.

Date,

July 16, 1881.

Locality, Off Martha's Vineyard

Bearings, Lat $40^{\circ} 13' N.$

Long. $70^{\circ} 41' 54'' W.$

Time of day, 8, 20 am of tide,

State of sky, Clear

Temperature of air,

72

" surface of water, 66 46402

" at depth of 10 fathoms, 48°

" of bottom, 49° 46403

Depth, in fathoms, 61, = 63.

Nature of bottom, green mud

Direction of surface current, S. force 1.

Force of surface current, drift W. by S. 1 m

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

920.
REMARKS.

Archaster americanus very abdt
Asterias vulgaris. few
Episynancha americana *americana*
Urticina perdis, dozen or more
Amphiuma newelli very abdt.
Pleurobranchia lata many.
Heterostethus tenera. 8.
Pecten tenuicostatus large many.
- *Anomia aculeata* Cin.
- *Cyprina Islandica*
- *Lunaria heros*.
Nephtys arata dead
- *Gedea sapotilla*.
- *Soripes lenser* dead
Suberites sp.
Ophiophryne varia,
Ophiopholis aculeata.
Euproctognathus Sh. small
Pontopholis Norvegicus.
Pandanus sp.
Molgula,
Ampelisca gracilis.
Hemipagurus small sp.

TEMPERATURE RECORD.

Instrument used, Thermometer

Current number of observation, 921.

Date, July 16, 1881.

Locality, Off Martha's Vineyard

Bearings, Lat. $40^{\circ} 0' F$ $48^{\circ} 4' N$

Long. $70^{\circ} 43' 54'' W$

Time of day, 9:40 a.m., of tide,

State of sky, Clear.

Temperature of air, 75°

" surface of water, 70° (46402)

" at depth of 10 fathoms, 66°

" of bottom, 62° (42663)

Depth, in fathoms, $65 = 67$.

Nature of bottom, Green sand

Direction of surface current, wind S.S.W. force 1.

Force of surface current, W. 1 m

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Trawl

Current number of observation,

922.

Date,

July 16, 1881.

Locality,

Off Martha's Vineyard.

Bearings, Lat. $41^{\circ} 03' 48''$ N
Long. $70^{\circ} 45' 54''$ W.

Time of day, 10, 57 A.M. of tide.

State of sky, Clear

Temperature of air, 76°

" surface of water, 72°

" at depth of 10 fathoms, 59°

" of bottom, 52° ,

Depth, in fathoms, 69, = 71.

Nature of bottom, Green mud, sand

Direction of surface current, S.W., force 2

Force of surface current, N. by E. 1 m

Direction of bottom current.

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used, Trawl

Current number of observation, 923,

Date, July 16, 1884.

Locality, Off Martha's Vineyard

Bearings, Lat. $40^{\circ} 01' 24''$ N

Long. $70^{\circ} 46' W.$

Time of day, 12.27 P.M. of tide.

State of sky, Clear

Temperature of air, $74\frac{1}{2}^{\circ}$

" surface of water, 72°

" at depth of 10 fathoms, 55°

" of bottom, 52°

Depth, in fathoms, 96. = 98.

Nature of bottom, Sand.

Direction of ~~surface~~ current, S.W., force 2.

Force of surface current, W.N.W., 1 $\frac{1}{2}$ m.

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used, Trawl

Current number of observation, 924,

Date, July 16, 1881.

Locality, Off Marchas vineyard,

Bearings, Lat. $39^{\circ} 57' 30''$ N.

Long. $70^{\circ} 46' 20''$ W.

Time of day, 1152 P.M. of tide,

State of sky, Clear,

Temperature of air, $74 \frac{1}{2}$

" surface of water, 71

" at depth of 5 fathoms, $70^{\circ} \{ 10^{\circ}, 61^{\circ}$

" of bottom, $44 \frac{1}{2}$,

Depth, in fathoms, $160 = 164$.

Nature of bottom, Sand

Direction of surface current, S.W. force 2

Force of surface current, N.W. 2 m

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Tide-w

Current number of observation,

925

Date,

July 16, 1881

Locality,

Off Marquesas Islands

Bearings,

Lat. $39^{\circ} 5' S$

Long. $160^{\circ} 47' W$

Time of day, 3.35 P.M.; off tide,

State of sky, Hazy.

Temperature of air, 74,

" surface of water, 71,

" at depth of 5 fathoms, 70° 10' f. 58°

" .. of bottom, 42°,

Depth, in fathoms, 224, = 229.

Nature of bottom, Sand and mixed

coral 5.8 W. force 3.

Direction of surface current,

South 11.6 W. by S. 1 1/2 m

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used, Trawl.

Current number of observation, 926.

Date, July 16, 1881

Locality, Off March's vineyard.

Bearings, Lat. $39^{\circ} 56' N$
Long. $70^{\circ} 46' W$.

Time of day, 5.24 P.M., low tide.

State of sky, Cloudy.

Temperature of air, 74°

" surface of water, 74°

" at depth of 10 fathoms, 68°

" of bottom, 44°

Depth, in fathoms, 195. = 199

Nature of bottom, mud and sand

Direction of wind, S.S.W. force 3,

Force of surface current, N.W. 12 m. 24 sec

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used, *Franck*

Current number of observation, *927*

Date, *July 20*

Locality, *Mornanaka Big Lk.*

Bearings, *Say Head lsh. House R. by S. 45° E. dist. 25 m.*

Position *Cove left N.W. & dist. 6 m.*

Time of day, *10.47*; of tide, *ebb.*

State of sky, *Cloudy*

Temperature of air, *68.*

" surface of water, *62*

" at depth of *5* fathoms, *61*

" of bottom, *59*

Depth, in fathoms, *11*

Nature of bottom, *Sandy*

Direction of ~~wind~~, *S.S. W.* Force *2*

Direction of ~~bottom current~~, *W. N. W. 2 m.*

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Travel

Current number of observation,

928

Date,

July 20

Locality,

Merrimack Eight

Bearings,

by compass N. 23 2/3 W.

Seaparison Cows Lgh. Dist. 2 1/2 m.

Time of day, 11.30

: of tide.

Low water

State of sky,

Partly cloudy

Temperature of air,

69

" surface of water, *62 1/2*

" at depth of 5 fathoms, *59*

" of bottom, *60*

Depth, in fathoms,

10

Nature of bottom,

Sand

Direction of ~~surface current~~, *Ward*

83 W. Force 3

~~bottom current~~, *Drift*

W by N 2 1/2 m.

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Dredge

Current number of observation,

929

Date,

July 20

Locality,

Vineyard Is. off Grassy Hole

Bearings,

S. by E. 4 $\frac{1}{4}$ m.

Distance lat. N. 2 by S. $\frac{3}{4}$ E 10m.

Time of day,

12:35 P.M.

of tide, Low water

State of sky,

Cloudy

Temperature of air,

66

" surface of water, 63

" at depth of 5 fathoms,

" of bottom, 62

Depth, in fathoms,

10

Nature of bottom,

Sand

Direction of ~~surface current~~, S. S. W.

Force 2

Direction of ~~surface current~~,

S. E. by S. $\frac{3}{4}$ m.

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Dredge

Current number of observation,

930

Date,

July 20

Locality, Vineyard Id. off 2 miles N.E.

Bearings, Bay Head S by E $\frac{1}{2}$ m.

Vineyard dredge ship N. $\frac{1}{2}$ S. $7\frac{1}{2}$ m.

Time of day, 1.10 P.M.; of tide,

low water

State of sky,

Cloudy

Temperature of air,

63

" surface of water, 63

" at depth of 5 fathoms, 63

" of bottom, 62

Depth, in fathoms, 12

Nature of bottom, Sand and shells

Direction of surface current, N.W. Force 2

Force of surface current, S. $\frac{1}{2}$ E. $\frac{1}{2}$ m.

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Dredge

Current number of observation,

931

Date,

July 20

Locality, Vineyard So. off Robinson Ht.

Bearings Robeck Lgh. to N. & E. 1 m.

Gaz Head Lgh. 2 W. by S $\frac{1}{2}$ S $\frac{1}{2}$ m.

Time of day, 142 P.M. of tide.

flood.

State of sky,

Cloudy

Temperature of air,

63

" surface of water, 63

" at depth of 5 fathoms,

" of bottom, 62

Depth, in fathoms,

16

Nature of bottom, sand and shells

Direction of surface current,

S. W. Force 2

Force of surface current,

S. $\frac{1}{2}$ W $\frac{1}{2}$ m.

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Kridge

Current number of observation,

932

Date,

July 20

Locality,

Vineyard Ld. off Lookout Bay

Bearings, Inspector Cove Lgh N. by E. 2 1/2 m.

Nobles Lgh N. by E. 3 1/2 m.

Time of day, 2:43 P.M. of tide,

flood

State of sky,

Cloudy

Temperature of air,

67

" surface of water, 65

" at depth of 5 fathoms, 66

" of bottom, 68

Depth, in fathoms,

14

Nature of bottom,

Rock

Direction of ~~surface current~~, S.W.

Force 2

Drift

N.W. by W. 4 m.

Intervallid low

which 65

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Sledge

Current number of observation,

933

Date,

July 20

Locality,

Vineyard Is. off Vineyard ^{173° 45' W.}

Bearings, West Chop Lgt. S $3\frac{1}{4}$ E. $\frac{1}{2}$ m.

Temperature air 59° W. 7 M.

Time of day, 8.30 P.M. of tide,

flood

State of sky,

Cloudy

Temperature of air,

68

" surface of water, 65

" at depth of 5 fathoms, 64

" of bottom, 64

Depth, in fathoms,

14

Nature of bottom,

Stones

Direction of ~~surface current~~, S.W. Force 8

Force of ~~bottom current~~, C.R. E. 2 $\frac{1}{2}$

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Gravel

Current number of observation,

934

Date,

July 20

Locality, Off Johnson's Harbor

Bearings, Kobeka light N. 48 1/2 m

Butcher light S 3/4 E 2 3/4 m

Time of day, 4:16 P.M. of tide,

State of sky,

Cloudy

Temperature of air,

68

" surface of water, 67

" at depth of 5 fathoms, 67

" of bottom, 67

Depth, in fathoms,

9

Nature of bottom, Sand and gravel.

Direction of surface current, Wind S.W.

Force 2

Force of surface current, Gulf N.N.W.

Force 1 m.

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

-- Instrument used,

Current number of observation,

Date,

Locality,

Bearings,

Time of day, ; of tide,

State of sky,

Temperature of air,

" surface of water,

" at depth of fathoms,

" of bottom,

Depth, in fathoms,

= 782

Nature of bottom,

Direction of surface current,

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Current number of observation,

Date,

Locality,

Bearings,

Time of day, ; of tide,

State of sky,

Temperature of air,

" surface of water,

" at depth of fathoms,

" of bottom,

Depth, in fathoms,

= 7.6.

Nature of bottom,

Direction of surface current,

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used, C. S.

Current number of observation, 1

Date, Aug. 12, 1882

Locality, Off Point Laysan

Bearings, N. E.

Time of day, 12.45 P.M.; of tide, High

State of sky, Cloudy

Temperature of air, 75°

" surface of water, 75°

" at depth of fathoms,

" of bottom,

Depth, in fathoms,

= 516. {Shoalable
616}

Nature of bottom, Sand

Direction of surface current, Ward

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Current number of observation,

Date,

Locality,

Bearings,

Time of day, ; of tide,

State of sky,

Temperature of air,

" surface of water,

" at depth of fathoms,

" of bottom,

Depth, in fathoms,

= 31 f.

Nature of bottom,

Direction of surface current,

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Current number of observation,

Date,

Locality,

Bearings,

Time of day, of tide,

State of sky,

Temperature of air,

" surface of water,

" at depth of fathoms,

" of bottom,

Depth, in fathoms, = 264

Nature of bottom,

Direction of surface current,

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used.

Current number of observation, -

Date, - 1891 -

Locality, -

Bearings, -

Time of day, - ; of tide,

State of sky, -

Temperature of air, -

" surface of water,

" at depth of - fathoms,

" of bottom,

Depth, in fathoms, - = 134

Nature of bottom,

Direction of surface current,

Force of surface current,

Direction of bottom current,

Force of bottom current;

Name of vessel,

To what service attached;

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Current number of observation,

Date,

Locality,

Bearings,

Time of day, of tide,

State of sky,

Temperature of air,

" surface of water,

" at depth of fathoms,

" of bottom,

Depth, in fathoms,

Nature of bottom,

Direction of surface current,

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Dredge

Current number of observation,

942

Date,

Aug. 9th

Locality, Lat 40° 45' N

Bearings, Long $71^{\circ} 12' 30''$ W.

Time of day, 6.15 AM; of tide,

State of sky, Clear

Temperature of air, 72

" surface of water, 69

" at depth of 5 fathoms, 69° , 10 fathoms 65°

" of bottom, 50°

Depth, in fathoms, $134 = 138$.

Nature of bottom, Sand and mud.

Direction of surface current, S.W. Force 2

Force of surface current, 5 Kts. 2.75

Direction of bottom current, S.W. Force 2

Force of bottom current, 5 Kts. 2.5

Name of vessel,

To what service attached.

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Dredge

Current number of observation,

9113

Date,

Aug. 9th

Locality, Lat. 40. N.

Bearings, Long. 71° 14'.80" W.

Time of day, 7:10 A.M.; of tide,

State of sky, Clear

Temperature of air, 76

" surface of water, 70

" at depth of 5 fathoms, 69°. 13 f. 65°

" of bottom, 49

Depth, in fathoms, 153 = 157.

Nature of bottom, Mud, sand & shells

Wind Wind Force 1

Direction of surface current,

Force of surface current, N.W. by S. 24 m.

Direction of bottom current, S. E. 52°

Force of bottom current, " 50 f. 53°

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Frank

Current number of observation,

Q111

Date,

Aug. 9th

Locality, *Sab. 40° 01' N.*

Bearings, *Song 71° 14' 30" W.*

Time of day, *8.27 AM*; of tide,

State of sky, *Clear*

Temperature of air, *78°*

" surface of water, *70°*

" at depth of *5* fathoms, *68.10 f. 66*

" of bottom, *57°*

Depth, in fathoms, *124 = 128*

Nature of bottom, *Sand, mud & shells*

Direction of surface current, *SW Face*

Force of surface current, *Small*

Temperature at *W.W.X.W. 116.00*

Direction of bottom current, *20 f. 5°*

Force of bottom current, *50 f. —*

Name of vessel.

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Isawd

Current number of observation,

945

Date,

Aug. 9th

Locality, Lat. 39° 58' N.

Bearings, Long. 71° 13'

Time of day, 12.05 ; of tide,

State of sky, Clear.

Temperature of air, 75°

" surface of water, 71°

" at depth of 5 fathoms, 70°, 10' 67°

" of bottom, 44°

Depth, in fathoms, 202 = 207.

Nature of bottom, Gr. mud & sand.

Direction of surface current, S.E. Force 4

Force of surface current, 10.16 (f.) 2 m.

Direction of bottom current, 40° 53°

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Franz

Current number of observation,

946

Date,

Aug. 9th

Locality, Lat. $39^{\circ} 55' 30''$

Bearings, Long. $71^{\circ} 14'$

Time of day, 2 P.M.; of tide,

State of sky, *S clear*

Temperature of air, $75^{\circ}, 5'$

" surface of water, 71°

" at depth of 5 fathoms, $61^{\circ}, 16^{\circ} 5'$

" of bottom, 47°

Depth, in fathoms, $241 = 247$

Nature of bottom,

By mud and sand

Direction of surface current,

W N. force 2

Force of surface current,

Drift S. N. 1 N. 1 1/2 m

Direction of bottom current,

Opposite to surface

Force of bottom current,

5 f. 52"

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used, *Diamond*
Current number of observation, *947*
Date, *Aug. 9th*
Locality, *Lat. $39^{\circ} 53' 30''$*
Bearings, *Long. $71^{\circ} 13' 30''$*

Time of day, *4 P.M.*; of tide,

State of sky, *Sacular*

Temperature of air, *75°*

" surface of water, *70°*

" at depth of *5 fathoms*, *60° , 10f. 55°*

" of bottom, *44°*

Depth, in fathoms, *$3\frac{1}{2} = 319$* .

Nature of bottom, *Sand and Mud*

Direction of surface current, *Wind S. W. Force 4*

Force of surface current, *W. S. W. 300*

Direction of bottom current, *SW 20 f. 50°*

Force of bottom current, " *50f. 50°*

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Aner.

Current number of observation,

948

Date,

Aug. 13 A.D.

Locality, *Buzzards Bay*

Bearings, *Prieville Island E 2 M.*

Time of day, *5.20 P.M.*; of tide,

State of sky, *clear*

Temperature of air, *76*

" surface of water, *67*

" at depth of fathoms,

" of bottom, *66*

Depth, in fathoms, *7*

Nature of bottom,

Clayey sand with shells

Direction of surface current,

S.W. Force 4

Force of surface current,

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

TEMPERATURE RECORD.

Instrument used,

Current number of observation,

Date, Aug, 23, 1881.

Locality, off Martha's Vineyard

Bearings, Lat. $40^{\circ} 03' N.$

Long. $50^{\circ} 31' W.$

Time of day, 4, 20 am; of tide,

State of sky, Clear

Temperature of air, 68°

" surface of water, 66°

" at depth of 5 fathoms, 66.

" of bottom, 52.

Depth, in fathoms, 100.

Nature of bottom, yellow mud.

Direction of surface current, wind W, force 3.

Force of surface current, drift N, N, W, 2 m.

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

Serial temperatures taken

949 -

REMARKS.

At about 4 am about
containing Capt. Chester
and others was left
with his haul to fish
for *Lophotolobus*, while
the lake dredge was
down, and before
the sun rose several
wings were taken
on the surface, exhib-
iting a much richer
fauna than is generally
found in the daytime

TEMPERATURE RECORD.

Instrument used,

Traevol

Current number of observation,

950,

Date, Aug. 23, 1884.

Locality, Off Martha's Vineyard.

Bearings, Lat. $40^{\circ} 07' N.$

Long. $70^{\circ} 32' W.$

Time of day, 5, 50 a.m.; of tide,

State of sky, Clear

Temperature of air, 69°

" surface of water, 65°

" at depth of fathoms,

" of bottom, 52°

Depth, in fathoms, $69.$

Nature of bottom, Sand, shells, mud,
wind.

Direction of surface current, W. force 4.

Force of surface current, N. N. W. $1 \frac{1}{2}$ m.

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

95°,
REMARKS.

Micraster americanus, ^{Chirindian} 3 buckets

TEMPERATURE RECORD.

Instrument used,

Trawl with bong.

Current number of observation, 957.

Date, Aug. 23, 1881.

Locality, Lat. ~~39°~~ 39° 57' N.

Bearings, Long. ~~70° 3' E~~ 70° 3' 20" W.

Time of day, 9, 40 a.m.; of tide,

State of sky, clear,

Temperature of air, 78°

" surface of water, 67½°

" at depth of 5 fathoms, 65°

" of bottom, 41°

Depth, in fathoms, 219.

Nature of bottom, mud,

Direction of wind, W. by N. force 3.

Force of surface current, n. 1½ m.

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.

First three catchings were used on trawl, brought up clean load, large Saera, Shrimp, Phryromona? large copepods not small, all saved but some salpae Chimaerae.

From trawl from:

Hornulidae very abdt.
Holoera briedae
Urophycis nodosa? (large sp.)
Thelphusina? benthos.

The wings, invented by Capt. Chesler, are a decided success and took many fine specimens, some of which tho' occasionally lost, up in trawl are generally crushed and torn, and in addition many small crustacea never taken in trawl.

TEMPERATURE RECORD.

Instrument used, *Torpedo fish sponge*.

Current number of observation, 952,

Date, Aug 20, 1881.

Locality, Off Martha's vineyard.

Bearings, Lat $39^{\circ} 55' N$

Long. $70^{\circ} 28' W$.

Time of day, 11.28 a.m.; of tide,

State of sky, Clear.

Temperature of air, 72,

" surface of water, 68,

" at depth of 5 fathoms, 66,

" of bottom, 40,

Depth, in fathoms, 388,

Nature of bottom, yellow mud and sand

Direction of surface current, by N.W. force 2.

Force of surface current, 11. E. by N. 1/2 m.

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

952 -

REMARKS.

the wings, many Ceratodes,
two or 3 small fish. ^{Alloposas,} ^{Mallie,}
Many Copepods, No Acanth-

Spiralid

deep sea worm tube about
 $\frac{1}{2}$ bushel down away
3 Urticina rodosa, ^{chromawg}
Acetella norvegica all sand.

TEMPERATURE RECORD.

Instrument used,

Travel with wings

Current number of observation,

953

Date, Aug. 23, 1881.

Locality,

Bearings, Lat. $39^{\circ} 52' 30''$ N.

Long. $70^{\circ} 17' 30''$ W.

Time of day, 2.30 P.M.; of tide,

State of sky, Clear.

Temperature of air, 72.

" surface of water, 68.

" at depth of 5 fathoms, 64.

" of bottom, $39\frac{1}{2}$

Depth, in fathoms, 715.

Nature of bottom, mud.

Direction of ~~surface current~~, WNW. force 2.

Drift ~~surface current~~, N. N. W., $1\frac{1}{2}$ m.

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

953 -

REMARKS.

A water haul but contained some things that might have come from the bottom. A squid, with hooks on most arms, including a very long one near end of long arms, several species of fishy fishes and crustacea. The wings contained small crustacea.

TEMPERATURE RECORD.

Instrument used,

Travel with wings.

Current number of observation, 954

Date, Aug. 23, 1881.

Locality, off Martha's Vineyard

Bearings, Lat. $39^{\circ} 53' N.$

Long. $70^{\circ} 18' 30'' W.$

Time of day, 4.50 P.M.; of tide,

State of sky, Clear

Temperature of air, 74.5

" surface of water, 68

" at depth of 5 fathoms, 65.

" of bottom, 39 $\frac{1}{2}$

Depth, in fathoms, 642.

Nature of bottom, sand and mud.

Direction of ~~surface current~~, ~~wind~~ force 2

Force of surface current, N.N.W. 2 m.

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

954 -
REMARKS.

at water haul like
the last, a few shrimps,
and jelly-fish.

In one of the trawl
wings there was nothing
in the other a few
Crustacea, Sagitta,
including the large
Copepods, which have
been obtained in all
of the haul hauls of
this day, and in addition
another new species
of Bremendous size measuring
just $\frac{1}{2}$ inch long, represented
by two species.

TEMPERATURE RECORD.

~~Travel with young~~
~~no one used~~

Instrument used,

Current number of observation, 955

Date, Aug. 26, 1881.

Locality, Bunnard Bay,

Bearings, Ryed Neck

E. by S. $\frac{1}{4}$ mile

Time of day, 10, 50 am, of tide,

State of sky, Clear

Temperature of air, ~~67°~~ 69°

" surface of water, ~~67°~~ 67.5°

" at depth of fathoms,

" of bottom, ~~62.5~~ 68"

Depth, in fathoms, 7.

Nature of bottom, Sand

Direction of wind, S.W. force 3,

Force of surface current, N. by S $\frac{1}{4}$ S. $\frac{1}{2}$ m.

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

~~Observ made on ship's
deck, temperature and
wind blowing strong~~

905,
REMARKS.

Large amt. of dead
eelgrass and many
Ciona esculenta

TEMPERATURE RECORD.

Instrument used, -706 trawl with long

Current number of observation, 956,

Date, Aug. 26, 1881

Locality, Buzzards Bay

Bearings, Fly Neck, S. S. E. 34°

E. 1/8 m.

Time of day, 11.26 A.M.; of tide, ebb.

State of sky, Clear,

Temperature of air, 71°

" surface of water, 69

" at depth of fathoms,

" of bottom, 68°

Depth, in fathoms, 5 1/4.

Nature of bottom, sandy.

Direction of wind, S. W. force 3.

Force of surface current, N. by S. 1/4 m

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

956-

REMARKS.

Same character of bottom
as last, dead eel grass.
Many specimens of
Sethya gracata, *Ciono*
suefokuree.

TEMPERATURE RECORD.

Instrument used, Trawl with wings.
Current number of observation, 957
Date, Aug. 26, 1881
Locality, Buzzards Bay
Bearings, Nye's Neck S.S.E. $3\frac{1}{4}$
E., 1/8 m.
Time of day, 11.45[—]; of tide, ebb.
State of sky, Clear
Temperature of air, 73,
" surface of water, 69.5[—]
" at depth of fathoms,
" of bottom, 68,
Depth, in fathoms, 6.
Nature of bottom, Sand & stones.
Direction of ~~surface current~~, wind, S.W. force 4,
Force of ~~surface current~~, W. $3\frac{1}{4}$ N. $1\frac{1}{4}$ m.
Direction of bottom current,
Force of bottom current,
Name of vessel,
To what service attached,
Name and rank of commanding officer,
Name and position of observer,

957
REMARKS.

Feltia velutina
abundant.

TEMPERATURE RECORD.

Instrument used, Trawl with wings.
Current number of observation, 958.
Date, Aug. 26, 1881.
Locality, Buzzard's Bay,
Bearings, Nye Neck S. by E.
1/4 E. 1/2 m
Time of day, 12.20 ; of tide, ebb.
State of sky, clear.
Temperature of air, 75,
" surface of water, 70,
" at depth of fathoms,
" of bottom, 68.
Depth, in fathoms, 5.
Nature of bottom, Sand, shones shells,
Direction of wind, S.W. force 5,
Force of surface current, N.E. IV 1/3 m
Direction of bottom current,
Force of bottom current,
Name of vessel,
To what service attached.
Name and rank of commanding officer,
Name and position of observer,

958.
REMARKS.

Lechuguilla or *Cleome*,

TEMPERATURE RECORD.

Instrument used,

Trawl with wings.

Current number of observation,

959.

Date, Aug. 26. 1881.

Locality, Buzzards Bay,

Bearings, Nye's Neck S.

12 m.

Time of day, 12.40 p.m. of tide, ebb.

State of sky, clear.

Temperature of air, 72.

" surface of water, 69.

" at depth of fathoms,

" of bottom, 68.

Depth, in fathoms, 5.

Nature of bottom, sand, stones, shelly,

and

Direction of surface current, S.W. force 5,

drift N. 1/2 mile

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

959.
REMARKS.

No Techya?

TEMPERATURE RECORD.

Instrument used,

Trawl trawlings,

Current number of observation,

960,

Date, Aug. 26, 1881.

Locality, Buzzard's Bay,

Bearings, Nye's Neck S. $3\frac{1}{4}$ E.

$\frac{1}{2}$ m.

Time of day, 110 Min. of tide,

State of sky, Clear,

Temperature of air, 72.5

" surface of water, 69.5

" at depth of fathoms,

" of bottom, 68,

Depth, in fathoms, 4 $\frac{1}{2}$

Nature of bottom, sand, stones, shells,

Direction of surface current, wind S.W. force 5,

Drift Force of surface current, S.W. by N. 1/2 m.

Direction of bottom current,

Force of bottom current,

Name of vessel,

To what service attached,

Name and rank of commanding officer,

Name and position of observer,

REMARKS.